UNITED STATES PATENT AND TRADEMARK OFFICE

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Robert D. Shedd, Patent Operations
THOMSON Licensing LLC
P.O. Box 5312
Princeton, NJ 08543-5312

EXAMINER
THOMPSON, JAMES A

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/559,643	BOYCE ET AL.
	Examiner	Art Unit	
	James A. Thompson	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>02 November 2010</u>.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-11</u> is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) <u>1-11</u> is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☐ All   b) ☐ Some * c) ☐ None of:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____.
      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set forth in

37 CFR 1.17(e), was filed in this application after final rejection. Since this application is

eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e)

has been timely paid, the finality of the previous Office action has been withdrawn pursuant to

37 CFR 1.114. Applicant's submission filed on 02 November 2010 has been entered.

Response to Arguments

2.   Applicant's arguments filed 02 November 2010 have been fully considered but they are

not persuasive.

        Regarding page 5, lines 1-18: Applicant's amendments to the claims have been fully

considered by Examiner and are fully addressed below.

        Regarding page 5, line 19 to page 7, line 20: Applicant argues that Reitmeier (US-

6,118,498) does not fully teach claims 1 and 10. Applicant particularly alleges that the demuxes

[30] and [35] and the switches [20] and [40] are not part of the decoder [45].

        Examiner replies that, as has been repeatedly set forth [see page 2, line 15 to page 3, line

2 of final rejection mailed 04 October 2010; page 6, line 13-15 of said final rejection; page 3,

lines 16-18 of non-final rejection mailed 29 July 2010], it is figure 1 of Reitmeier that

corresponds to the claimed video decoder, and not merely element [45]. Applicant is arguing

with respect to Applicant's own enforced interpretation of Reitmeier, and is not responding to

the actual rejection set forth by Examiner.

Regarding page 7, line 21 to page 8, line 3: Applicant argues that figure 1 of Reitmeier

is described as a "receiver" and not a "decoder".

Examiner replies that the apparatus shown in figure 1 of Reitmeier receives video data,

decodes the video, and outputs decoded video data. Thus, figure 1 of Reitmeier is a decoder.

Applicant's arguments are therefore merely nominative, rather than substantive.

Regarding page 8, line 4 to page 9, line 20: Applicant argues that the memory (34) in

figure 1 is not comprised within the video decoder.

Examiner replies that, as discussed above and explicitly set forth in the previous office

action, figure 1 of Reitmeier is the video decoder, not simply element 45 of figure 1.

Applicant argues that the memory (34) is not for storing reference pictures, but rather

allegedly only for scanning channels.

Examiner replies that column 5, lines 61-65 of Reitmeier explicitly teaches that the

memory stores I-pictures. I-pictures are reference pictures. Claims 1 and 10 do not require that

multiple reference pictures are stored at the same time, but rather that reference pictures are

stored in the memory. The cited portion of Reitmeier also explicitly states that the retrieved I-

frame is coupled to the video decoder. Thus, the reference picture is used in video decoding,

even if the video decoding also includes a channel change operation.

Additionally, for the sake of furthering the prosecution of the application, additional

grounds of rejection are set forth in items 9-12 which assume arguendo that the language of

claims 1 and 10 require that multiple reference pictures are stored at the same time.

Regarding page 9, line 21 to page 10, line 2: Applicant's arguments are based on alleged advantages of the claimed invention, but do not address the particular limitations of claims 1 and 10 that are allegedly not taught by Reitmeier.

Regarding page 10, line 3 to page 11, line 4: Applicant argues that the remaining cited references do not cure the alleged deficiency of Reitmeier, and that the remaining claims are allegedly allowable at least due to their respective dependencies from either claim 1 or claim 10.

Examiner replies that the disputed limitations are fully taught by Reitmeier. Therefore, claims 1 and 10 are not allowable, and the remaining claims cannot therefore be allowable merely due to their respective dependencies from either claim 1 or claim 10.

Regarding page 11, lines 5-26: Applicant argues that Reitmeier does not teach the post-processing of claim 3 since the memory (34) of claim 3 must be the same as the memory of claim 1, and is disposed before the video decoder (35).

Examiner replies that, as has been set forth repeatedly, the video decoder (35) corresponds to the recited normal decoding portion, and is not the entire recited video decoder. Thus, the memory (34) is a part of the video decoder and can be utilized in the performance of post-processing. Further, Laksono (US-7,675,972) is relied upon to teach the recited post-processing filter in signal communication with a normal decoding portion for post-processing decompressed video data and selectably outputting said data to at least one normal frame store, and not Reitmeier. This is particularly shown in column 3, lines 22-37 of Laksono, wherein post-processing is performed so as to rapidly update motion vectors and improve video encoding and decoding.

Regarding page 11, line 27 to page 13, line 3: Applicant argues that the upsampling

taught by Brooks (US-7,143,432) would change the principle of operation of Reitmeier.

Examiner replies that the upsampling taught by Brooks occurs before the video data is

output to the display. Thus, the principle of operation of Reitmeier is unaffected. Brooks merely

adds functionality to the overall system taught by Reitmeier. Including the functionality of

Brooks would allow the combined system to provide a better output video by matching the

characteristics of the display. An example of this would be if the video output is standard

definition and the display is high definition. One would need to provide upsampling to obtain a

better video output for the display.

Regarding page 13, lines 4-11: As discussed above, and set forth in detail below, the

presently recited claims are fully taught by the prior art. Thus, the present application is not yet

in condition for allowance.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4.   **Claims 1, 4 and 7-11 are rejected under 35 U.S.C. 102(b) as being anticipated by**

Reitmeier (US-6,118,498).

Regarding claim 1: Reitmeier discloses a video decoder for receiving compressed

stream data and providing decompressed video output (figure 1 and column 4, lines 43-49 of

Reitmeier), the decoder comprising: a demultiplexor for receiving the compressed stream data

and separating a normal stream and a channel change stream there from (figure 3(324) and

column 9, line 63 to column 10, line 5 of Reitmeier – see also column 4, lines 46-49 of Reitmeier

which shows that the stream data is compressed stream data), the normal stream and the channel

change stream each being generated external to the video decoder (fig. 1(5) and column 3, lines

34-67 of Reitmeier) and comprising a plurality of pictures for a same program (column 4, lines

1-9 of Reitmeier – MPEG stream contains frames for the video program, and thus a plurality of

pictures for a same program); a normal decoding portion in direct signal communication with

the demultiplexor for selectably receiving at least one of the compressed normal and channel

change streams (figure 3(328) and column 9, line 67 to column 10, line 12 of Reitmeier), and

providing decompressed video output (column 4, lines 47-49 of Reitmeier); and at least one

normal frame store in signal communication with the normal decoding portion for storing

reference pictures (figure 1(34) and column 5, lines 61-65 of Reitmeier) for use in decoding

inter-coded pictures (column 5, lines 15-27 of Reitmeier).

Regarding claim 4: Reitmeier discloses means for selecting a compressed picture to

decode from one of a normal stream and a channel change stream (column 4, lines 43-49 of

Reitmeier).

Regarding claim 7: Reitmeier discloses means for decoding channel change pictures

from user data of corresponding normal stream pictures (column 10, lines 9-27 of Reitmeier –

user data regarding the different normal picture streams, such as "next" and "recent-1", is used

in decoding channel change pictures).

Regarding claim 8: Reitmeier discloses means for responding to a signal from an

encoder indicating whether to use normal stream or channel change stream pictures for

subsequent channel change stream intra-coded pictures (column 5, lines 1-6 and lines 16-22 of

Reitmeier – selected mode determines which stream is used).

Regarding claim 9: Reitmeier discloses means for post-processing the output of the

normal decoder to reduce the abruptness of a transition from lower-quality to normal quality

output (column 5, lines 37-43 of Reitmeier).

Regarding claim 10: Reitmeier discloses, in a video decoder, a video decoding method

for receiving compressed stream data and providing decompressed video output (figure 1 and

column 4, lines 43-49 of Reitmeier), the method comprising: receiving the compressed stream

data and separating a normal stream and a channel change stream there from (figure 3(324) and

column 9, line 63 to column 10, line 5 of Reitmeier – see also column 4, lines 46-49 of Reitmeier

which shows that the stream data is compressed stream data), the normal stream and the channel

change stream each being generated external to the video decoder (fig. 1(5) and column 3, lines

34-67 of Reitmeier) and comprising a plurality of pictures for a same program (column 4, lines

1-9 of Reitmeier – MPEG stream contains frames for the video program, and thus a plurality of

pictures for a same program); receiving at least one of the compressed normal and channel

change streams (figure 3(328) and column 10, lines 3-12 of Reitmeier), and providing

decompressed video output (column 4, lines 46-49 of Reitmeier); and storing reference pictures

for use in decoding inter-coded pictures (figure 1(34) and column 5, lines 61-65 of Reitmeier).

Regarding claim 11: Reitmeier discloses at least one of: selecting a compressed picture

to decode from one of a normal stream and a channel change stream (column 4, lines 43-49 of

Reitmeier); up-sampling lower resolution channel change stream pictures; decoding redundant

picture syntax in compliance with the JVT standard; decoding channel change pictures from user

data of corresponding normal stream pictures (column 10, lines 9-27 of Reitmeier – user data

regarding the different normal picture st*reams, such as "next" and "recent-1", is used in*

decoding channel change pictures); responding to a signal from an encoder indicating whether to

use normal stream or channel change stream pictures for subsequent channel change stream

intra-coded pictures (column 5, lines 1-6 and lines 16-22 of Reitmeier – selected mode

determines which stream is used); and post-processing the output of the normal decoder to

reduce the abruptness of a transition from lower-quality to normal quality output (column 5, lines

37-43 of Reitmeier) (*claim requires "at least one of" and more than one of is taught by*

Reitmeier).

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

6.   Claims 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Reitmeier (US-6,118,498) in view of Brooks (US-7,143,432).

Regarding claim 2: Reitmeier discloses a lower-resolution decoding portion in signal

communication with the demultiplexor for receiving the compressed channel change stream

(figure 1(32) and column 6, lines 4-16 of Reitmeier); at least one channel change frame store in

signal communication with the lower-resolution decoding portion for storing reference pictures (figure 1(34) and column 5, lines 61-65 of Reitmeier).

Reitmeier does not disclose expressly an up-sampling unit in signal communication with the lower-resolution decoding portion for up-sampling decompressed video data and selectably outputting said data to at least one of the at least one normal frame store and a display.

Brooks discloses an up-sampling unit in signal communication with the lower-resolution decoding portion for up-sampling decompressed video data and selectably outputting said data to at least one of the at least one normal frame store and a display (figure 6A(860) and column 18, lines 8-18 of Brooks).

Reitmeier and Brooks are analogous art because they are from the same field of endeavor, namely control, processing and output of digital video image data. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to up-sample the decompressed video data before outputting to a display, as taught by Brooks. The motivation for doing so would have been to provide a better output video by matching the characteristics of the display. Therefore, it would have been obvious to combine Brooks with Reitmeier to obtain the invention as specified in claim 2.

Regarding claim 5: Reitmeier does not disclose expressly means for up-sampling lower resolution channel change stream pictures.

Brooks discloses means for up-sampling lower resolution stream pictures (figure 6A(860) and column 18, lines 8-18 of Brooks).

Reitmeier and Brooks are analogous art because they are from the same field of endeavor, namely control, processing and output of digital video image data. At the time of the

invention, it would have been obvious to a person of ordinary skill in the art to up-sample the
video data before outputting to a display, as taught by Brooks. By combination with Reitmeier,
the stream pictures would be the channel change stream pictures. The motivation for doing so
would have been to provide a better output video by matching the characteristics of the display.
Therefore, it would have been obvious to combine Brooks with Reitmeier to obtain the invention
as specified in claim 5.

7.   **Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reitmeier
(US-6,118,498) in view of Laksono (US-7,675,972).**

        Regarding claim 3: Reitmeier does not disclose expressly a post-processing filter in
signal communication with the normal decoding portion for post-processing decompressed video
data and selectably outputting said data to at least one normal frame store.

        Laksono discloses a post-processing filter in signal communication with a normal
decoding portion for post-processing decompressed video data and selectably outputting said
data to at least one normal frame store (column 3, lines 22-37 of Laksono – post-processing
performed so as to rapidly update motion vectors and improve video encoding/decoding).

        Reitmeier and Laksono are analogous art because they are from the same field of
endeavor, namely digital video encoding and decoding. At the time of the invention, it would
have been obvious to a person of ordinary skill in the art to post-process the decompressed video
data and selectably outputting said data to at least one normal frame store, as taught by Laksono.
The motivation for doing so would have been to improve the video data processing speed by

more rapidly updating the motion vectors. Therefore, it would have been obvious to combine

Laksono with Reitmeier to obtain the invention as specified in claim 3.

8.   Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reitmeier

(US-6,118,498) in view of well-known prior art.

Regarding claim 6: Reitmeier discloses means for decoding redundant picture syntax

(column 9, lines 1-14 of Reitmeier).

Reitmeier does not disclose expressly that the decoding is in compliance with the

JVT/H.264/MPEG AVC standards.

Official Notice was taken in the final rejection of 04 October 2010 that the

JVT/H.264/MPEG AVC standards are old, well-known and expected in the art. Since the

Official Notice has not been timely rebutted, **it is taken as admitted by Applicant** that the

JVT/H.264/MPEG AVC standards are old, well-known and expected in the art. The use of a

particular standard is necessary for the actual implementation of a video encoding/decoding

scheme. The JVT/H.264/MPEG AVC standards are simply commonly-used standards that one

of ordinary skill in the art at the time of the invention would have been able to apply to the

invention. Therefore, it would have been obvious to combine the well-known prior art with

Reitmeier to obtain the invention as specified in claim 6.

9.   Claims 1, 4 and 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reitmeier (US-6,118,498) in view of Girod (US-6,480,541).

Regarding claim 1: Reitmeier discloses a video decoder for receiving compressed stream data and providing decompressed video output (figure 1 and column 4, lines 43-49 of Reitmeier), the decoder comprising: a demultiplexor for receiving the compressed stream data and separating a normal stream and a channel change stream there from (figure 3(324) and column 9, line 63 to column 10, line 5 of Reitmeier – see also column 4, lines 46-49 of Reitmeier which shows that the stream data is compressed stream data), the normal stream and the channel change stream each being generated external to the video decoder (fig. 1(5) and column 3, lines 34-67 of Reitmeier) and comprising a plurality of pictures for a same program (column 4, lines 1-9 of Reitmeier – MPEG stream contains frames for the video program, and thus a plurality of pictures for a same program); a normal decoding portion in direct signal communication with the demultiplexor for selectably receiving at least one of the compressed normal and channel change streams (figure 3(328) and column 9, line 67 to column 10, line 12 of Reitmeier), and providing decompressed video output (column 4, lines 47-49 of Reitmeier); and at least one normal frame store in signal communication with the normal decoding portion for storing a reference picture (figure 1(34) and column 5, lines 61-65 of Reitmeier) for use in decoding inter-coded pictures (column 5, lines 15-27 of Reitmeier).

Reitmeier does not disclose expressly storing multiple reference pictures.

Girod discloses a normal frame store in signal communication with a normal decoding portion for storing multiple reference pictures (fig. 2 and column 7, lines 41-55 of Girod).

Reitmeier and Girod are analogous art because they are from the same field of endeavor,
namely control, processing and output of digital video image data. At the time of the invention,
it would have been obvious to a person of ordinary skill in the art to store multiple reference
pictures in the normal frame store. The motivation for doing so would have been to improve
video-on-demand service by allowing the use of multiple different possible bit rates. Therefore,
it would have been obvious to combine Girod with Reitmeier to obtain the invention as specified
in claim 1.

Regarding claim 4: Reitmeier discloses means for selecting a compressed picture to
decode from one of a normal stream and a channel change stream (column 4, lines 43-49 of
Reitmeier).

Regarding claim 7: Reitmeier discloses means for decoding channel change pictures
from user data of corresponding normal stream pictures (column 10, lines 9-27 of Reitmeier –
user data regarding the different normal picture streams, such as "next" and "recent-1", is used
in decoding channel change pictures).

Regarding claim 8: Reitmeier discloses means for responding to a signal from an
encoder indicating whether to use normal stream or channel change stream pictures for
subsequent channel change stream intra-coded pictures (column 5, lines 1-6 and lines 16-22 of
Reitmeier – selected mode determines which stream is used).

Regarding claim 9: Reitmeier discloses means for post-processing the output of the
normal decoder to reduce the abruptness of a transition from lower-quality to normal quality
output (column 5, lines 37-43 of Reitmeier).

Regarding claim 10: Reitmeier discloses, in a video decoder, a video decoding method for receiving compressed stream data and providing decompressed video output (figure 1 and column 4, lines 43-49 of Reitmeier), the method comprising: receiving the compressed stream data and separating a normal stream and a channel change stream there from (figure 3(324) and column 9, line 63 to column 10, line 5 of Reitmeier – see also column 4, lines 46-49 of Reitmeier which shows that the stream data is compressed stream data), the normal stream and the channel change stream each being generated external to the video decoder (fig. 1(5) and column 3, lines 34-67 of Reitmeier) and comprising a plurality of pictures for a same program (column 4, lines 1-9 of Reitmeier – MPEG stream contains frames for the video program, and thus a plurality of pictures for a same program); receiving at least one of the compressed normal and channel change streams (figure 3(328) and column 10, lines 3-12 of Reitmeier), and providing decompressed video output (column 4, lines 46-49 of Reitmeier); and storing a reference picture for use in decoding inter-coded pictures (figure 1(34) and column 5, lines 61-65 of Reitmeier).

Reitmeier does not disclose expressly storing multiple reference pictures.

Girod discloses storing multiple reference pictures (fig. 2 and column 7, lines 41-55 of Girod).

Reitmeier and Girod are analogous art because they are from the same field of endeavor, namely control, processing and output of digital video image data. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to store multiple reference pictures. The motivation for doing so would have been to improve video-on-demand service by allowing the use of multiple different possible bit rates. Therefore, it would have been obvious to combine Girod with Reitmeier to obtain the invention as specified in claim 10.

Regarding claim 11: Reitmeier discloses at least one of: selecting a compressed picture to decode from one of a normal stream and a channel change stream (column 4, lines 43-49 of Reitmeier); up-sampling lower resolution channel change stream pictures; decoding redundant picture syntax in compliance with the JVT standard; decoding channel change pictures from user data of corresponding normal stream pictures (column 10, lines 9-27 of Reitmeier – user data *regarding the different normal picture streams, such as "next" and "recent-1", is used in* decoding channel change pictures); responding to a signal from an encoder indicating whether to use normal stream or channel change stream pictures for subsequent channel change stream intra-coded pictures (column 5, lines 1-6 and lines 16-22 of Reitmeier – selected mode determines which stream is used); and post-processing the output of the normal decoder to reduce the abruptness of a transition from lower-quality to normal quality output (column 5, lines 37-43 of Reitmeier) (*claim requires "at least one of" and more than one of is taught by* Reitmeier).

10.   Claims 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reitmeier (US-6,118,498) in view of Girod (US-6,480,541) and Brooks (US-7,143,432).

Regarding claim 2: Reitmeier discloses a lower-resolution decoding portion in signal communication with the demultiplexor for receiving the compressed channel change stream (figure 1(32) and column 6, lines 4-16 of Reitmeier); at least one channel change frame store in signal communication with the lower-resolution decoding portion for storing reference pictures (figure 1(34) and column 5, lines 61-65 of Reitmeier).

Reitmeier in view of Girod does not disclose expressly an up-sampling unit in signal communication with the lower-resolution decoding portion for up-sampling decompressed video data and selectably outputting said data to at least one of the at least one normal frame store and a display.

Brooks discloses an up-sampling unit in signal communication with the lower-resolution decoding portion for up-sampling decompressed video data and selectably outputting said data to at least one of the at least one normal frame store and a display (figure 6A(860) and column 18, lines 8-18 of Brooks).

Reitmeier in view of Girod is analogous art with respect to Brooks because they are from the same field of endeavor, namely control, processing and output of digital video image data. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to up-sample the decompressed video data before outputting to a display, as taught by Brooks. The motivation for doing so would have been to provide a better output video by matching the characteristics of the display. Therefore, it would have been obvious to combine Brooks with Reitmeier in view of Girod to obtain the invention as specified in claim 2.

Regarding claim 5: Reitmeier in view of Girod does not disclose expressly means for up-sampling lower resolution channel change stream pictures.

Brooks discloses means for up-sampling lower resolution stream pictures (figure 6A(860) and column 18, lines 8-18 of Brooks).

Reitmeier in view of Girod is analogous art with respect to Brooks because they are from the same field of endeavor, namely control, processing and output of digital video image data. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to

up-sample the video data before outputting to a display, as taught by Brooks. By combination

with Reitmeier, the stream pictures would be the channel change stream pictures. The

motivation for doing so would have been to provide a better output video by matching the

characteristics of the display. Therefore, it would have been obvious to combine Brooks with

Reitmeier in view of Girod to obtain the invention as specified in claim 5.

11.   Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reitmeier

(US-6,118,498) in view of Girod (US-6,480,541) and Laksono (US-7,675,972).

Regarding claim 3: Reitmeier in view of Girod does not disclose expressly a post-

processing filter in signal communication with the normal decoding portion for post-processing

decompressed video data and selectably outputting said data to at least one normal frame store.

Laksono discloses a post-processing filter in signal communication with a normal

decoding portion for post-processing decompressed video data and selectably outputting said

data to at least one normal frame store (column 3, lines 22-37 of Laksono – post-processing

performed so as to rapidly update motion vectors and improve video encoding/decoding).

Reitmeier in view of Girod is analogous art with respect to Laksono because they are

from the same field of endeavor, namely digital video encoding and decoding. At the time of the

invention, it would have been obvious to a person of ordinary skill in the art to post-process the

decompressed video data and selectably outputting said data to at least one normal frame store,

as taught by Laksono. The motivation for doing so would have been to improve the video data

processing speed by more rapidly updating the motion vectors. Therefore, it would have been

obvious to combine Laksono with Reitmeier in view of Girod to obtain the invention as specified

in claim 3.

**12.   Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reitmeier
(US-6,118,498) in view of Girod (US-6,480,541) and well-known prior art.**

Regarding claim 6: Reitmeier discloses means for decoding redundant picture syntax

(column 9, lines 1-14 of Reitmeier).

Reitmeier in view of Girod does not disclose expressly that the decoding is in compliance

with the JVT/H.264/MPEG AVC standards.

Official Notice was taken in the final rejection of 04 October 2010 that the

JVT/H.264/MPEG AVC standards are old, well-known and expected in the art. Since the

Official Notice has not been timely rebutted, **it is taken as admitted by Applicant** that the

JVT/H.264/MPEG AVC standards are old, well-known and expected in the art. The use of a

particular standard is necessary for the actual implementation of a video encoding/decoding

scheme. The JVT/H.264/MPEG AVC standards are simply commonly-used standards that one

of ordinary skill in the art at the time of the invention would have been able to apply to the

invention. Therefore, it would have been obvious to combine the well-known prior art with

Reitmeier in view of Girod to obtain the invention as specified in claim 6.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Thompson whose telephone number is (571)272-7441. The examiner can normally be reached on 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward L. Coles can be reached on 571-272-7402. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/James A Thompson/
Primary Examiner, Art Unit 2625

20 December 2010